"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/258/62/002/002/011/018
I028/I228

24.4200

AUTHOR: Tonoyan, V. S. (Erevan)

TITLE: Bending of elliptical prismatic bars with grooves

PERIODICAL: Inzhenernyy zhurnal, v. 2, no. 2, 1962, 338-351

TEXT: The bending of continuous and sloping prismatic bars of elliptic cross-sections, having symmetrically placed grooves on the side of the small axis, is examined for the case of a bending force acting along the axis of symmetry of the profile. The stress function F is determined in elliptic coordinates for one quadrant of the cross-section only, the latter being symmetrical. The selected region is represented in the form of two overlapping regions, and solutions in the form of infinite series are sought for the corresponding stress functions F_1 and F_2. The coefficients of these series are determined by integration of the differential equation of F with the aid of the boundary conditions for F_1 and F_2. The determination of the integration constants reduces to the solution of regular infinite sets of linear equations. A numerical example is given. There are 5 figures.

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SUBMITTED: July 14, 1961

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONOYAN, V.S. (Yerevan)

Bending of elliptic prismatic beams with notches. Inzh.zhur. (MIRA 15:6)
2 no.2:338-351 '62.
(Beams and girders)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

BABLOYAN, A.A.; TONOYAN, V.S.

Some problems of the torsion of shafts of varying cross section with mixed boundary conditions. Izv. AN Arm. SSR. Ser.fiz.-mat. nauk 14 no.6:49-63 '61. (MIRA 15:1)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Boundary value problems)
(Elastic rods and wires)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONOYAN, V.S.

Flexure of a prismatic rod having an elliptic annular cross section. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 14 no.3:69-80 '61. (MIRA 14:8)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Flexure) (Elastic rods and wires)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONOYAN, V.S. (Yerevan)

Torsion of a hollow prismatic bar with an elliptic cross section having a cut-out. Izv. AN SSSR, Otd. tekh.nauk.Mekh. i mashinostr. no. 1:9-18 Ja-F '61. (MIRA 14:2)

1. Institut matematiki i mekhaniki AN ArmSSR.
(Torsion)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

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S/022/61/014/004/004/010
D299/D302

AUTHOR: Tonoyan, V. S.

TITLE: Flexure of sloping prismatic beam of an elliptic section with notches

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 14, no. 4, 1961, 87-102

TEXT: Flexure of a sloping beam of elliptical section is considered, with notches symmetrically distributed with respect to the minor axis (Fig. 1). The problem reduces to solving an infinite system of linear equations. It is shown that these systems are entirely regular. Formulas are derived for determining the stresses. The lateral surface of the beam is free. One of the end-sections is clamped, and to the other, a distributed load is applied. Let the external bending force Q be applied to the free end of the beam, in such a way that the flexure is not accompanied by torsion. The stress function F(x) satisfies the equation

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Flexure of sloping ...

$$\nabla^2 F\,(x,y) = \frac{Q\sigma x}{(1+\sigma)J} - \frac{Q}{2J} f'(x) \qquad (1.1)$$

where J is the moment of inertia with respect to the x-axis, f(x) - an arbitrary function. Passing to elliptical coordinates, one obtains

$$\nabla^2 F\,(\alpha,\beta) = \frac{A_1 Qc^3}{4J} (ch\alpha \sin 3\beta + ch3\alpha \sin\beta) \qquad (1.5)$$

$$\frac{\partial F}{\partial s} = \frac{Qc^3 sh^2\alpha_3}{2J}\left(\frac{ch^2\alpha \sin^2\beta}{ch^2\alpha_3} + \frac{sh^2\alpha \cos^2\beta}{sh^2\alpha_3} - 1\right)\frac{d(ch\alpha \sin\beta)}{ds} \qquad (1.6)$$

where

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Flexure of sloping ...

$$A_1 = A_2 + \text{th}^2\alpha_3, \quad A_2 = \frac{\sigma}{1+\sigma}, \quad a = c\ \text{ch}\alpha_3, \quad b = c\ \text{sh}\alpha_3 \qquad (1.7)$$

Owing to the symmetry of the cross-sectional area, the function F(x,y) is determined in one quadrant only (Fig. 2). One sets

$$F(\alpha,\beta) = \begin{cases} F_1(\alpha,\beta) \text{ in the region } \Omega_1, \text{ where } \alpha \geqslant \alpha_2 \\ F_2(\alpha,\beta) \text{ in the region } \Omega_2, \text{ where } \beta \geqslant \beta_1 \end{cases} \qquad (1.17)$$

The functions F_1 and F_2 are sought in the form of series:

$$F_1(\alpha,\beta) = \sum_{k=1}^{\infty} \psi_k(\beta)\sin\gamma_k(\alpha-\alpha_2) \quad (\alpha_2 < \alpha < \alpha_3) \qquad (1.22)$$

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

Flexure of sloping ...

$$F_2(\alpha,\beta) = \sum_{k=1}^{\infty} \varphi_k(\alpha)\sin\mu_k(\beta - \beta_1) \quad \left(\beta_1 < \beta < \frac{\pi}{2}\right) \qquad (1.23)$$

(where γ, μ, φ, ψ are given by expressions). The stress function is determined as follows: First, a differential equation is derived for the function ψ which is determined by integration. The formulas which express the function ψ contain the coefficients A_k which have yet to be determined. Similarly, the solution for the function φ contains the coefficients D_k. An infinite system of linear equations is derived for the coefficients A_k, and another such system for D_k. Having thus determined ψ and φ, one finally obtains the sought-for expression for the stress function $F(\alpha,\beta)$. It is shown that the infinite systems

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Flexure of sloping ...

$$\left.\begin{aligned} X_k &= \sum_{p=1}^{\infty} a_{kp} Y_p + P_k, \\ Y_k &= \sum_{p=1}^{\infty} b_{kp} X_p + Q_k, \end{aligned}\right\} \quad (k = 1, 2, \ldots) \qquad (2.22)$$

for A_k and D_k are regular, their free terms having an upper bound and tending to zero with $k \to \infty$; this makes it possible to determine X_k and Y_k with the desired accuracy. Further, two particular cases are considered: Finite expressions are obtained for the stress function in the case of flexure of a beam with cross-section in the form of an elliptical ring (case 1), and in the form of an elliptical ring with interior cuts (case 2). There are 4 figures and 11

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S/022/61/014/004/004/010
D299/D302

Flexure of sloping ...

references: 6 Soviet-bloc and 5 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: R. Mohan, Some simple problems of flexure.- Part I., Zeit. angew. Math. und Mech., 1956, 36, no. 11-12. 427-432; R. Mohan, Some flexure problems.- Part II., Proc. Rajasthan Acad. Sci., 1956, 6, July 6-16; R. Mohan, Flexure of a beam of non-isotropic material having a section bounded by two confocal ellipses and a straight edge, Proc. Rajasthan Acad. Sci., 5, May 1955, 15-22; A. Chakravorti, Centre of flexure of a beam of orthotropic material having a section bounded by an ellipse and its major axis. Zeit. angew. Math. und Mech., 39, no. 7-8, 1959, 309-313.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics AS Armenian SSR)

SUBMITTED: March 2, 1961

Card 6/16

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/022/59/012/06/03/009

AUTHORS: Abramyan, B. L., Tonoyan, V. S.

TITLE: Torsion of Prismatic Bars of the Cross Section of Which is an Annular Sector With Teeth

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1959, Vol. 12, No. 6, pp. 69-88

TEXT: The authors consider bars, the cross section of which is an annular sector which bears one or two symmetrically situated ring-sector-shaped apertures, so that there remains a ring sector with two or one ring-sector shaped teeth. According to a method of N. Kh. Arutyunyan (Ref. 12) the rigorous solution of the probelm is reduced to the solution of infinite systems of linear equations, from which the constants of the solution represented by a series must be obtained. The authors prove that the systems are completely regular in the sense of Kantorovich. In the case of a circle or circular ring sector closed expressions for torsional rigidity and tangential stresses are obtained. Numerical examples are considered.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/022/59/012/06/03/009

Torsion of Prismatic Bars, the Cross Section of Which is an Annular Sector With Teeth

A. N. Dinnik, A. Sh. Loshkin and V. N. Lyskov are mentioned in the paper. There are 8 figures, 5 tables, and 16 referenoes: 9 Soviet, 1 German, 1 Swiss, 1 American, 2 English and 2 French.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics AS Armenian SSR)

SUBMITTED: June 25, 1959

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

BABLOYAN, A.A.; TONOYAN, V.S.

Two-dimensional problem for an orthotropic plate shaped as an annular sector. Izv.AN Arm.SSR. Ser. fiz.-mat. nauk 17 no.5:27-42 '64.
(MIRA 17:12)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

BABLOYAN, A.A.; TONOYAN, V.S.

Flexure of a two-layer thick circular plate by an axially symmetric load. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 16 no.1:13-32 '63. (MIRA 16:3)

1. Institut matematiki i mekhaniki AN Armyanskoy SSR.
(Elastic plates and shells) (Deformations (Mechanics))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONSEK MILOS

Paroxysmal nocturnal hemaglobinuria (PNH). Miloš Tonsek (Hosp., Nový Bydžov, Czech.). *Folia Haematol.* 73, 224–300(1955).—In patients with this disease, the Dacie test, Crosby test, and especially the plasma-Fe curve were pos. The PNH had a chronic progressive character. Administration of Fe by mouth induced hemoglobinuria. Only a part of the erythrocytes became abnormal, but young erythrocytes were more fragile than mature ones. The electron microscope demonstrated marked changes in the erythrocyte cell membrane; it being rough, hard, and irregular. 71 references. John T. Myers MD

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TON'SHIN, A.I., inzh.

Mechanical design of the suspension of electric lines.
Svetotekhnika 7 no.11:22-26 N '61. (MIPA 14:11)

1. Gosudarstvennyy proyektnyy institut "Tyazhpromelektroproyekt".
(Electric lines, Overhead)
(Street lighting)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONSKIKH, A. V.

"Neurohormonal Factors Blood Circulation Changes During Painful Stimulation." Paper presented at the 21st Int'l. Congress of Physiological Sciences, 9-15 Aug 1959, Buenos Aires.

Pavlov Institute of Physiology, Leningrad, USSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONSKIY, D.G., inzh.; YEMEL'YANOV, V.I., arkhitektor

Plans of apartment houses to be built on collective farms and state farms. Biul.stroi.tekh. 18 no.4:32-34 Ap '61. (MIRA 14:6)

(Farmhouses) (Apartment houses)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVIC, Kruno, inz. (Zagreb)

On the Avignon Bridge. Gradevinar 14 no.4:121-124 '62.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVIC, K.

Planning bridge designs.

P. 8 (CESTE I MOSTOVI) (Zagreb, Yugoslavia) Vol. 6, no. 1, Jan. 1958

SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5. 1958

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVIC, K.

Construction of highway bridges during the past decade. p.2.
CESTE I MOSTOVI. Index to v. 3, 1955.
Vol. 4, no. 1, Jan. 1956

SOURCE: East European Accessions List (EEAL), Library of Congress
Vol. 5, No. 6, June 1956

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVIC, K.

TONKOVIC, K. A railroad viaduct over the Zagreb Highway. p. 515.

Vol. 4, No. 12, Dec. 1956.
CESTE I MOSTOVI
TECHNOLOGY
Zagreb, Yugoslavia

So: East European Accession, Vol. 6, No. 2, February 1957

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVIC, K.

TONKOVIC, K. How we produce quality concrete. p. 6.

Vol. 5, no. 1, Jan. 1957
CESTE I MOSTOVI
TECHNOLOGY
Zagreb

So: East European Accession, Vol. 6, no. 3, March 1957

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

K. TONKOVIC

"The Viaduct in Novaka on the Belgrade-Zagreb Turnpike. p. 2" (GRADJEVINAR, Vol. 5, No. 1, Jan. 1953, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions, L.C., Vol. 2, No. 11, Nov. 1953, Uncl.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVID, A., inzh.; ZARUBINSKIY, Ye., krupchatnik

Letters to the editor. Muk.-elev. prom. 28 no.10:31 O '62. (MIRA 16:1)

1. Kiyevskaya normativno-issledovatel'skaya stantsiya (for Tonkovid). 2. Georgiyevskiy mel'nichnyy kombinat No.3 (for Zarubinskiy).

(Grain handling)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

ZONTOV, Yevgeniy Gerasimovich. Prininimal uchastiye TONKOVICH, V.S., nauchnyy sotr.; TORKAYLO, I., red.; DIK, V., tekhn. red.

[Financial interrelations of collective farms with the state]Finansovye vzaimootnosheniia kolkhozov s gosudarstvom. Minsk, Sel'khozgiz BSSR, 1962. 77 p. (MIRA 15:11)

1. Institut ekonomiki Akademii nauk Belorusskoy SSSR (for Tonkovich).
(White Russia--Collective farms--Taxation)
(White Russia--Agricultural credit)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVID, A., inzh.

We have mechanized drying chamber unloading operations and the separation of corn seed samples. Muk.-elev. prom. 28 no.5:22 My '62. (MIRA 15:5)

1. Kiyevskaya normativno-issledovatel'skaya stantsiya.
(Corn (Maize))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONKOVID, L.A. [Tonkovyd, L.A.]

Using as basis the technical side surface characteristics of shoe lasts in designing shoe upper patters. Leh.prom. no.1: 59-63 Ja-Mr '62. (MIRA 15:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti.

(Shoe manufacture)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

BRANDENBURG, B., kand. arkhitektury; TONSKIY, D., kand. ekonomicheskikh nauk

Standardization of apartment houses according to types of apartments. Zhil. stroi. no.11:16-19 '65.

(MIRA 18:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONSOIU, V., prof. (Comuna Murgas, Reg. Oltenia)

Demonstration of the inclination of the earth's axis to the ecliptic. Natura Geografie 15 no.1:62-64 Ja-F '63.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

CAPRIOARA, D., prof.; TONTE, E.; POP, E.; FANEA, E.; TOMA, L.; ROSENBERG, O.

Aspects of the staphylococcal infection of the newborn in the Cluj Gynecologic and Obstetric Clinic. Microbiologia (Bucur) 6 no.1:27-28 Ja-F '61.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

IONOV, N.I.; TONTEGODE, A.Ya.

Probing characteristics measured by various kinds of probes in a gas discharge plasma in mercury and cesium vapors. Zhur. tekh.fiz. 34 no. 2:354-360 F '64. (MIRA 17:6)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

34211
S/057/62/032/002/012/022
B124/B102

26.2314

AUTHORS: Zandberg, E. Ya., Paleyev, V. I., and Tontegode, A. Ya.

TITLE: Dependence of the temperature threshold of surface ionization of cesium on tungsten on the cesium vapor tension

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 2, 1962, 208 - 213

TEXT: A uniform electrode surface is considered which is only slightly covered by adsorbed atoms of the ionized element.

$$I^+ = \frac{\varepsilon s A n}{A + \exp\left(\frac{\varepsilon}{kT}\right)(V - \varphi - \psi)}$$ holds for the temperature dependence of the surface ionization current, where ε is the ion charge, s is the ionizing surface area, A is the ratio of the statistical sums of ionic and atomic states, n is the atomic flux per surface unit area per second, V is the ionization potential of the atom, φ is the work function of the surface, and ψ is the correction to φ for the effect of an electric surface field. If $V - \varphi - \psi < 0$, the surface ionization current reaches its maximum; with T = 0 and $\varphi + \psi - V \gg kT$ the current remains close to its maximum. The section

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bd (Fig. 1) is termed the threshold region of the surface ionization curve, and T_o is the threshold temperature. In the steady state, the flux of atoms n incident on a homogeneous surface is

$$n = N\left[C\exp\frac{-(I_+ - \psi_1)}{kT} + D\exp\frac{-(I_0 + \psi_2)}{kT}\right] = \quad (4)$$
$$= N\left[C\exp-\frac{I'_+}{kT} + D\exp-\frac{I'_0}{kT}\right][1],$$

where N is the number of atoms per cm^2, C and D are constants slightly dependent on T, I_+ and I_o are the isothermal evaporation heats of ion and atom, respectiv ly, in the absenc of an electric field near the surface, and ψ_1 and γ_2 are correction factors for such a field (E). The surface ionization coefficient is $\beta = \frac{NC}{n}\exp\left(-\frac{I'_+}{kT}\right)$. If $\ln n = C' + \ln\frac{N}{N_1} + \frac{I'_+}{k}\left(\frac{1}{T_{o1}} - \frac{1}{T_o}\right)$ (6), where n_1 is a fixed flux of atoms, and T_{o1} is the relevant threshold temperatu , and N/N_1 is slightly temperature-dependent, the

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Dependence of the ...

temperature dependence $\ln n = f\left(\frac{1}{T_o}\right)$ is determined by the evaporation heats of the ions from surface 1^{+}. Thus one finds $N/N_1 = \frac{(V-\varphi_w)(T_o - T_{o1})}{T_{o1}(\varphi_w - \varphi_1)}$ $\frac{T_o}{T_{o1}}$ = where φ_w is the work function of a pure tungsten surface, which is correct provided that $\varphi_{kmin} + \gamma \gg kT$, where φ_{kmin} is the minimum of the local work function. In order to verify these theoretical results experimentally, a cylindrical capacitor was placed into an unsoldered bulb filled with Cs vapor and containing a tungsten thread, 100 microns in diameter and 14 cm long, which was fastened along its axis. Ions emitted from the central portion of the thread were collected by the measuring cylinder. The bulb was provided with taps containing metallic Cs and a Ba-Ti getter. The temperature of the thread was measured with an optical micropyrometer; at low temperatures, it was determined from the filament current. The temperature of the first thermostat was kept above that of the second which was used to calculate the vapor pressure of Cs. The ion current was measured with a mirror galvanometer of a sensitivity limit of $3 \cdot 10^{-10}$ a/scale unit. The temperature dependence of the ionization of Cs on W was studied

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Dependence of the ...

in a Cs vapor pressure range of $9 \cdot 10^{-9}$ to $5 \cdot 10^{-4}$ mm Hg, with a change in the threshold temperature from 880 to 1430°K. Since the error due to the omission of the change in the degree of adsorption is about 6%, Eq. (6) may be re-written as $\ln n \approx L + \frac{1}{k}\left(\frac{1}{T_o} - \frac{1}{T_{o1}}\right)$. Professor N. I. Ionov, Professor A. I. Gubanov, and N. D. Potekhina are thanked for discussion. There are 5 figures and 12 references: 5 Soviet and 7 non-Soviet. The four most recent references to English-language publications read as follows: W. B. Nattingham, Proc. of the Fourth International Conference on Ionization Phenomena in Gases (Uppsala, 17 - 21 August, 1959), 1, 486, 1960. R. C. Evans, Proc. Roy. Soc. A139, 604, 1933; J. B. Taylor, J. Langmuir, Phys. Rev. 44, 423, 1933; T. J. Killian, Phys. Rev. 27, 578, 1926.

ASSOCIATION: Fizikio-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe, AS USSR, Leningrad)

SUBMITTED: June 17, 1961

Card 4/5

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

37071
S/057/62/032/004/017/017
B173/B102

26.1640 26,2312

AUTHORS: Zandberg, E. Ya., Ionov, N. I., Paleyev, V. I., and Tontegode, A. Ya.

TITLE: Determination of thermionic emission constants from energy distribution curves for thermoelectrons and positive ions

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 4, 1962, 503 - 516

TEXT: For plane and coaxially cylindrical electrodes with homogeneous work function, expressions ("ideal" retardation curves) for the emission current are derived on the assumption of Maxwellian energy distribution, and extended to electrodes with inhomogeneous work function (experimental retardation curves). As the areas of different work function (spots) cannot be localized, only a qualitative consideration is possible. The contact potential field of the spots is regarded first as being compensated by the external field (independent emission of individual spots) and then as not being compensated. The mean work function of the cathode was determined from the saturation current at given temperature. An apparent contact potential difference, which can be determined from the experimental

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Determination of thermionic...

curves and is related to the mean work functions of the electrodes in the same manner as the contact potential difference between homogeneous electrodes is to their work functions, is assumed for the arrangement of electrodes with inhomogeneous emission. The electron gas temperature for the experimental case of inhomogeneous electrodes is determined in the same way as for the ideal case of homogeneous electrodes. The retardation curves of the positive ion current caused by surface ionization at the cathode are considered analogously. The case of a compensated contact potential field was experimentally investigated in a vacuum tube with coaxially arranged triodes (polycrystalline tungsten cathode) and with a container for metallic Cs. Retardation curves for thermoelectrons ($T > 2000^{\circ}K$) and positive Cs ions ($T = 1200^{\circ}K$) were plotted, and the mean work functions, the apparent contact potential difference, and the mean temperatures determined. The compensation of the electron space charge by positive Cs ions was examined in the same tube, used as a diode system. There are 9 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: May 11, 1961

Card 2/2

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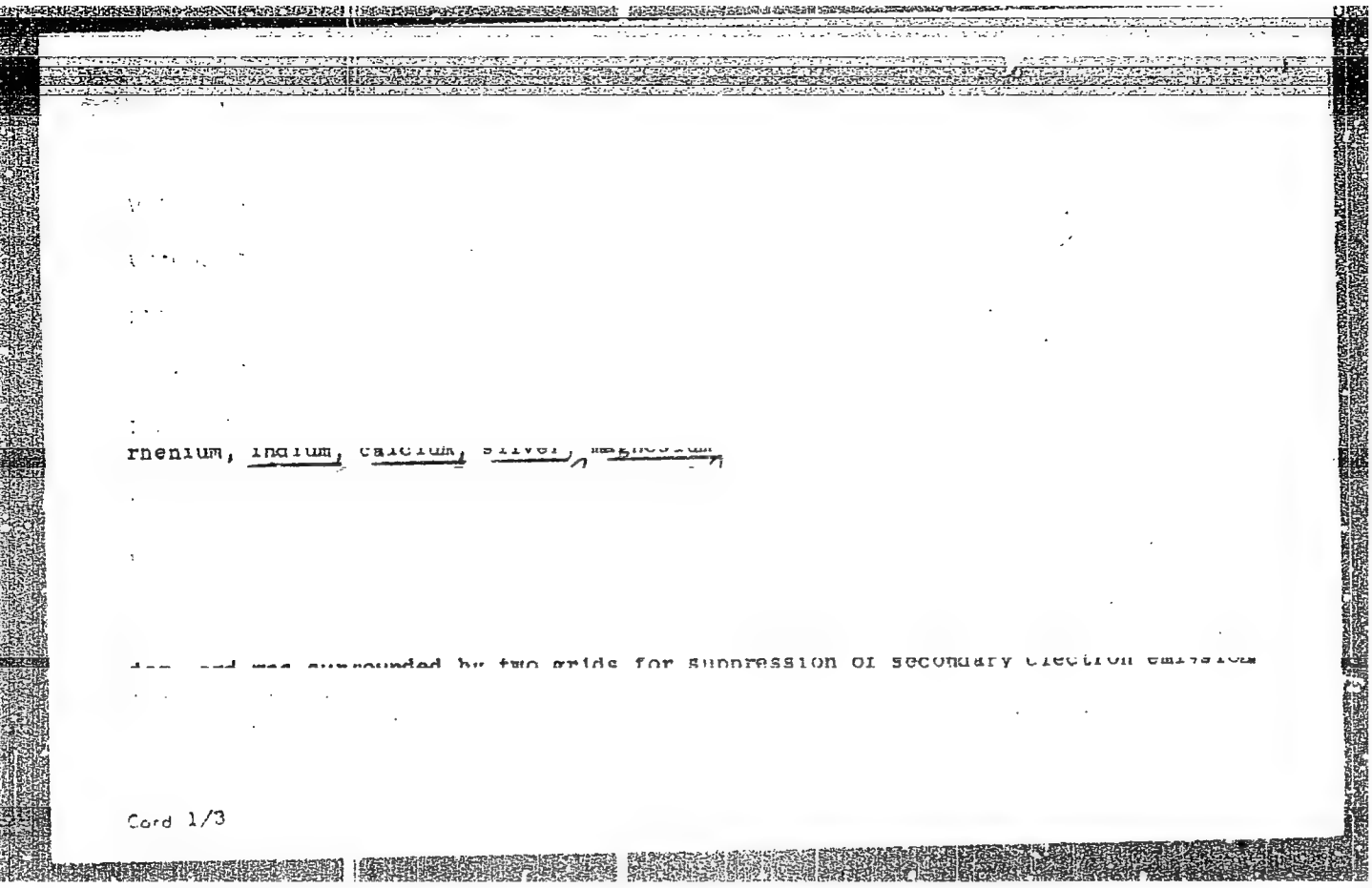
"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5



rhenium, indium, calcium, silver, [illegible]

[illegible] and was surrounded by two grids for suppression of secondary electron emission

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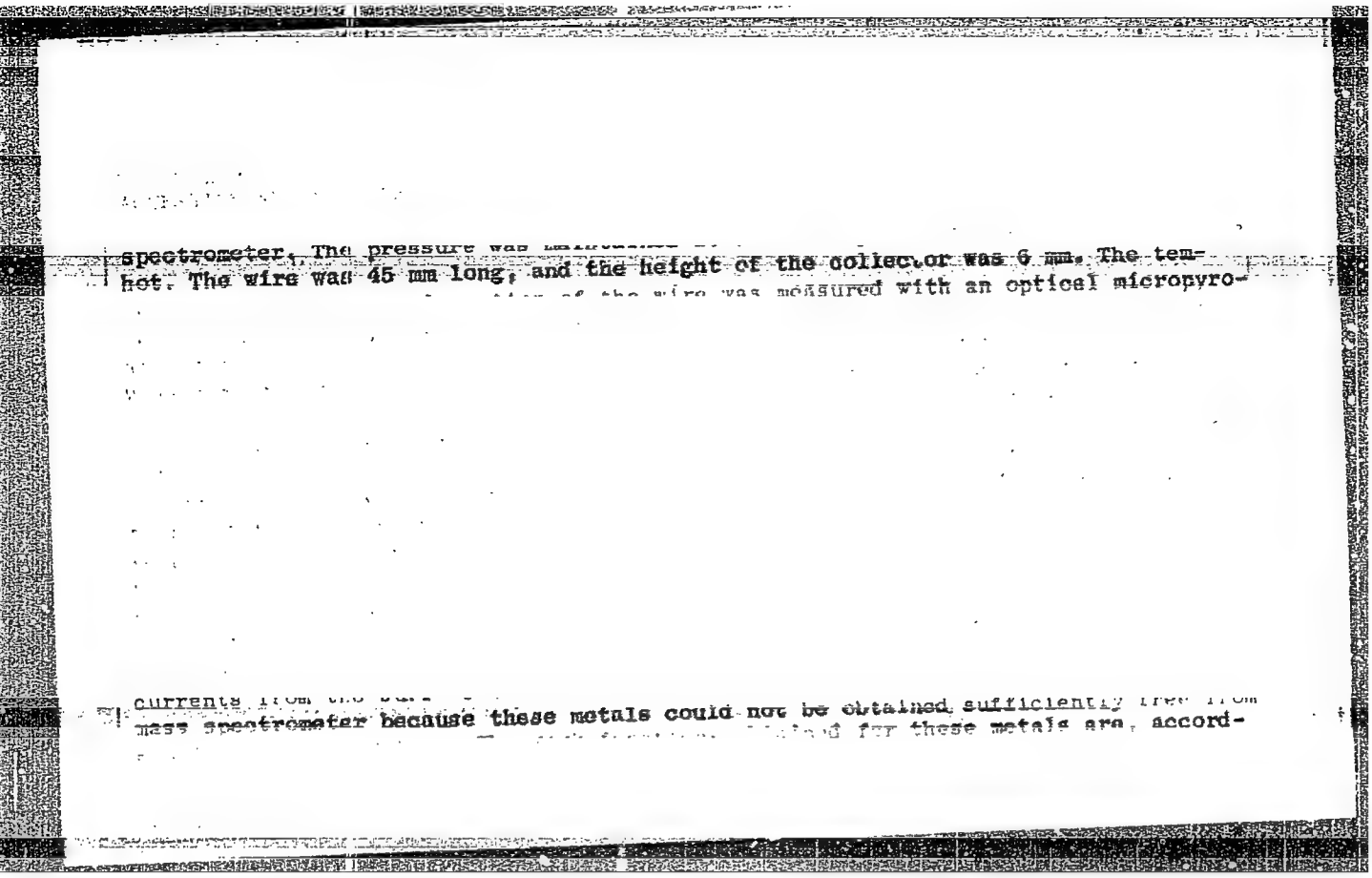

spectrometer. The pressure was [illegible]
hot. The wire was 45 mm long, and the height of the collector was 6 mm. The temperature of the wire was measured with an optical micropyro-

currents from the [illegible]
mass spectrometer because these metals could not be obtained sufficiently free from [illegible] for these metals are, accord-

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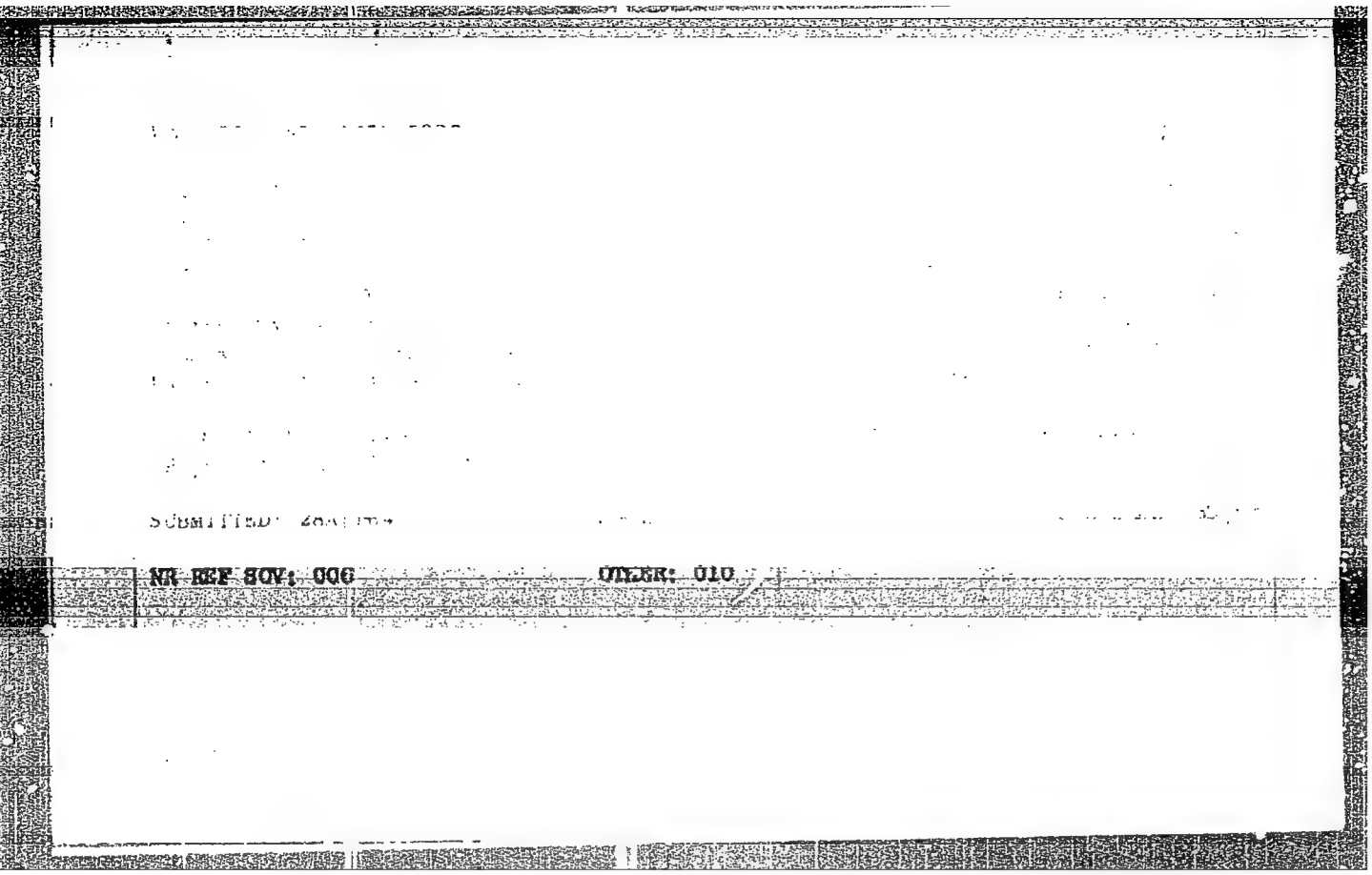

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

L 34817-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG/AT

ACC NR: AP6013719 SOURCE CODE: UR 0057/66/036/006/0963/0980

AUTHOR: Zandberg, E. Ya.; Tontegode, A. Ya.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Rhenium thermoemitters, a survey

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 963-980

TOPIC TAGS: rhenium, thermionic emission, surface ionization, ion source, mass spectrometry, field emission, thermionic energy conversion, MELTING POINT, WORK FUNCTION, REFRACTORY METAL

ABSTRACT: In this survey article, which has a bibliography of 74 entries, the authors review the properties of rhenium with particular attention to its use as a thermionic emitter and as a medium for surface ionization and compare them with those of other refractory metals such as tungsten, molybdenum, and tantalum. The scope of the survey is indicated by the section and subsection headings: 1) Melting point; 2) Heat of vaporization and vapor pressure; 3) Crystal structure; 4) Mechanical properties; 5) Electric conductivity; 6) Chemical properties, a) Reaction with carbon, b) Reaction with nitrogen, c) Reaction with oxygen, d) Reaction with water, e) Reaction with Alundum; 7) Spectral emissivity; 8) Thermionic emission; 9) Surface ionization work function; 10) Surface ionization of alkali halide molecules; 11) Examples of

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ACC NR: AP6018719

applications, a) Surface ionization ion sources for mass spectrometers; b) Electron impact ion sources for mass spectrometers, c) Field emitters, d) Ionization gages, e) Energy converters. In the section on crystal structure there are also discussed the texture of polycrystalline rhenium and the use of thin rhenium films on substrates of other refractory metals. The melting point of rhenium is lower than that of tungsten and its work function is higher; rhenium is accordingly not always the most suitable material for applications requiring the highest possible thermionic emission. Rhenium, however, combines a relatively low thermionic work function and a high surface ionization work function with advantageous mechanical properties, a high melting point, a low vapor pressure in the operating temperature range, and a chemical inertness that assures very stable operation. The authors predict that rhenium will find increasing use as thermionic emitters and surface ionization media in special electronic devices. Orig. art. has: 4 formulas, 12 figures, and 6 tables. [15]

SUB CODE: 20,11/ SUBM DATE: 23Dec65/ ORIG REF: 038/ OTH REF: 036
ATD PRESS: 5030

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

AUTHOR Zandberg, E.Ya.; Tontegode, A.Ya.

TOPIC TAGS: surface ionization, alkali metal, alkali halide, rhenium, lithium, sodium, potassium, cesium, chloride

ABSTRACT: The surface ionization currents of Cs, CsCl, K, KCl, Na, NaCl, Li and LiCl on polycrystalline Re were measured at temperatures [illegible]. The measurements [illegible] ry of surface ionization with a polycrystalline material under thermodynamic equilibrium conditions, assuming the dissociation of alkali halide molecules on their

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ACCESSION NR: AP5015637

apparatus and experimental technique elsewhere (ZhTF 34,1809,1964). The ionization took place on the surface of a 100 μ diameter Re wire which was subjected to the preliminary heat treatment described in [illegible] mm Hg and the contribution of impurities to the measured [illegible] cussed in detail. It was found that [illegible] perature the surface ionization current of an alkali metal shows the same temperature dependence as that of its chloride. This critical temperature decreases with increasing atomic weight of the alkali metal. The ionization threshold temperature was lower for an alkali metal than for its chloride, and the threshold temperature difference also decreased with increasing atomic weight. From this it is concluded that alkali halides are completely dissociated on Re at high temperatures but only slightly dissociated at temperatures near the surface ionization threshold. Ion currents measured with Li atoms [illegible]

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L 54754-65 3

ACCESSION NR: AP5015637

V.Starodubtsev (Trudy Fiz.-tekhn.inst. AN Uzb.SSR 2,6,1948), and the theories were found to be able to account for the data. The temperature dependences of the surface ionization currents from the alkali metal atoms were in qualitative agreement with the predictions of the theory of surface ionization on an inhomogeneous surface. There is a final discussion of data in the literature from which it is concluded that rhenium adsorbs residual gases considerably less than does tungsten. "The authors thank Professor N.I.Ionov for discussing a number of topics considered in this paper." Orig.art.has: 5 formulas and 8 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 020ct64 ENCL: 00 SUB CODE: EM, EC

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/0057/64/034/002/0354/0360

ACCESSION NR: AP4013429

AUTHOR: Ionov, N.I.; Tontegode, A.Ya.

TITLE: Probe characteristics obtained with various types of probe in mercury and cesium vapor gas discharge plasmas

SOURCE: Zhurnal tekhn.fiz.,v,34, no.2, 1964, 354-360

TOPIC TAGS: plasma, mercury plasma, cesium plasma, gas discharge plasma, plasma diagnostics, probe, plasma probe

ABSTRACT: Probe measurements in mercury and cesium vapor gas discharge plasmas were undertaken primarily to observe the behavior of a type of multielectrode probe proposed long ago by one of the authors (N.I.Ionov,DAN SSSR 85,753,1952) and subsequently ignored. Both electron and ion characteristics were obtained. The 6 cm long hot cathode discharge was produced in a 7.5 cm diameter glass tube. The multielectrode probe consisted of four plane electrodes, the dimensions of which are not given but which measured more than 4 mm in at least one direction. These electrodes were mounted parallel to the axis of the discharge at 3 mm intervals in a centrally located side tube, the first electrode closing the entrance to the side tube. The

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ACCESSION NR: AP4013429

first three electrodes had rectangular openings for passage of ions and electrons, and the fourth electrode served as collector. The mercury and cesium vapors were frozen out of the side tube by a liquid nitrogen trap. A simple cylindrical probe was mounted opposite the multi-electrode probe for comparison. The multi-electrode probe could be operated as a simple plane probe by connecting all the electrodes together, or it could be operated as a two, three, or four electrode probe as desired. When two electrodes were employed, the analyzing potential was applied between the first electrode and the plasma, and a constant potential to distinguish between ion and electron current was applied between this electrode and the collector. When the probe was used as a three or four electrode device, the first electrode was kept at the plasma potential to prevent disturbance of the plasma by the probe field. When all four electrodes were employed, one electrode served to suppress photoelectric and secondary electron emission from the collector. Two groups of thermal electrons of widely different temperature were observed in both plasmas at suitable pressures (2×10^{-1} to 9×10^{-3} tor for mercury and 3×10^{-3} to 4×10^{-4} tor for cesium). At lower pressures, at least in the mercury plasma, the electron distribution became non-Maxwellian. The temperatures obtained for the hotter group of electrons (of the order of 10^4 ^oK) varied considerably, depending on the probe connection employed. From the measurements reported, and many not reported, the authors

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draw the following conclusions: 1) The electron characteristic of the plane probe at small retarding potentials, as well as the observed plasma potential and electron density, is practically independent of the number of electrodes employed. 2) At large retarding potentials, the one, two, and three electrode probes give different results. This is due to errors inherent in one and two electrode probe systems. 3) The fourth electrode is required for correct measurements in rarefied plasmas such as occur in interplanetary space. 4) The cylindrical probe characteristic differs from the plane probe characteristic in all conditions investigated. Orig.art. has: 7 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physical-Technical Institute, AN SSSR)

SUBMITTED: 28Dec62 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH, SD NR REF SOV: 002 OTHER: 002

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

ZANDBERG, E.Ya.; TONTEGODE, A.Ya.

Surface ionization of Li, Na, K, and Cs atoms and LiCl, NaCl, KCl, and CsCl molecules on polycrystalline rhenium. Zhur. tekh. fiz. 35 no.6:1115-1126 Je '65. (MIRA 18:7)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

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L 2303-66 EWT(l)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EWA(d)/EPA(w)-2/T/EWP(t)/EWP(b)
LJP(c) JD/JG/AT

ACCESSION NR: AP5020741 UR/0057/65/035/008/1501/1503

AUTHOR: Zandberg, E. Ya.; Tontegodo, A. Ya.

TITLE: Thermionic emission constants of molybdenum, tantalum, and tungsten wires

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1501-1503

TOPIC TAGS: work function, thermionic emission, surface ionization, polycrystal, molybdenum, tantalum, tungsten

ABSTRACT: The authors have measured the thermionic and surface ionization work functions of 100 to 150 micron diameter polycrystalline Ta, Mo, and W wires with an apparatus that they have described elsewhere (ZhTF, 35, 149, 1965). Tungsten was measured as a control. The thermionic work functions were derived from Richardson curves and the surface ionization work functions were determined from the temperature dependence of the surface ionization current of indium. The temperatures were measured with an optical micropyrometer and were corrected to true values by means of published tables. The Mo, Ta, and W wires were annealed at 2400°, 2600°, and 2700°K, respectively. This heat treatment was sufficient to stabilize the thermionic emission properties and to eliminate self-emission of impurity alkali metal ions. The residual gas pressure was approximately 10^{-7} mm Hg.

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L 2303-66 4

ACCESSION NR: AP5020741

The measured thermionic work functions of Ta, Mo, and W were 4.33, 4.33, and 4.58 V, respectively; the corresponding surface ionization work functions were 4.88, 5.02, and 5.14 V. The probable errors of these work functions range from 0.03 to 0.07 V. The values found for the work functions differ considerably from those reported by Kh.Khadzhimukhamedov and G.N.Shuppe (Izv. AN Uzb. SSR, Ser. fiz.-mat. nauk, 2, 55, 1957) . This discrepancy is ascribed to the use by Khadzhimukhamedov and Shuppe of easily ionized alkali metals to measure the surface ionization work functions. Ta and (from earlier work) Re wires have much more stable thermionic emission properties than Mo or W wires. Orig. art. has: 1 formula, 1 figure, and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR) 44,55

SUBMITTED: 21Jan65 ENCL: 00 SUB CODE: SS, EM

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Micro wires

BVK

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

L 2301-66 EWT(m)/EPF(c)/EWA(d)/T/ JD/JW

ACCESSION NR: AP5020742 UR/0057/65/035/008/1504/1515

AUTHOR: Zandberg, E. Ya.; Ionov, N. I.; Tontegode, A. Ya.

TITLE: Mass spectrometric determination of the heat of vaporization of atoms and positive ions in sublimation of polycrystalline rhenium, tungsten, tantalum, and molybdenum

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1504-1515

TOPIC TAGS: heat of sublimation, vacuum sublimation, atom, ion, work function, mass spectometer, rhenium, tungsten, tantalum, molybdenum

ABSTRACT: The authors have directly determined the vaporization energies La and Li of atoms and ions from polycrystalline surfaces of the refractory metals Re, W, Ta, and Mo. These measurements are said to be the first direct determinations of Li. The samples were 4[illegible] mm long 100 to 150 micron polycrystalline wires located on the common axis of three cylindrical grids to which appropriate potentials could be applied. Positive ions leaving the surface of the sample were extracted by negative potentials on the cylindrical grids and their flux was measured with a mass spectrometer. When atoms were being investigated, the ions were excluded by

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ACCESSION NR: AP5020742

positive potentials on the grids. The atoms diffused into a chamber where they were ionized by an electron beam and the resulting ion flux was measured with the mass spectrometer. The use of a mass spectrometer to determine the composition of the sublimed gas is considered essential. When the residual gas pressure in the apparatus was 10^{-7} mm Hg, only atoms and atomic ions were found; when the pressure was (1-5) x 10^{-6} mm Hg, oxide molecules and molecular ions were also present. The temperature of the sample was determined with an optical micropyrometer, and the position of the sample and the electrode system was monitored by measuring the surface ionization of indium. The samples were subjected to a prolonged preliminary heating at the highest temperature employed in the measurements. The vaporization energies were determined from the temperature dependences of the fluxes. The thermodynamic theory of this determination is derived and the type of average over the different crystallographic faces to which it leads is discussed. It is not possible directly to test the consistency of the data by means of the Schottky relation $L_a - L_i = e(W - V)$, where W is the work function and V is the ionization potential, because the different quantities are averaged differently. The question of averages is discussed at some length, and inequalities are derived that the measured values of L_a, L_i, and W should (and do) satisfy. The statistical error of the vaporization energy measurements was approximately 5%. A systematic error as great as 4% is possible in the Mo and Ta temperature measurements. The values ob-

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ACCESSION NR: AP5020742

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tained for L_a are compared with those found by other authors, and some discrepancies are discussed. "The authors are grateful to N.D.Potekhina for participating in a discussion of the work." Orig. art. has: 24 formulas, 3 figures, and 1 table

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 08Feb65 ENCL: 00 SUB CODE: NP, SS

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONTIC, M.

Custom privileges and treatment of commercial samples. Medun transp 8 no.8:573-577 Ag '62.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONTIC, M.

Main forms of customs control in Yugoslav customs regulations. Tehnika transp 10 no.10:49-51 O '64.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONTIC, M.

Basic forms of customs control according to the Yugoslav customs regulations. Medun transp 10 no.11:48-52 N '64.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONTIC, M.

Practice of the Belgian customs service in determining custom values. Mødun transp 10 no. 5:361-362 My '64.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONTIC, M.

Custom control measures which ease the international freight transport by the Danube River. Medun transp 10 no. 6:430-431 Je '64.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONTIC, Milorad

Yugoslav tariff system. Medun transp 9 no.5:305-309 My '63.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

DROC, I., farmacist; COSTACHESCU, I., ing. chimist; TONTICI, G., ing. agronom; SOSCHIN, N., ing. agronom

Utilization of sorbic acid for wine stabilization. Ind alim veget 13 no.1:16-19 Ja '62.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

MATEI, Gh., corespondent; ,TONU, H., corespondent

Enthusiasm. Constr Buc 14 no.676:1 22 D'62.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONU, H., p. conf., corespondent

If it would be according to me. Constr Bue 15 no.700:
4 8 Je '63.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

FAROGA, Emil; CIOBANU, Alexandru; NIGA, Constantin; TONU, Haralambie

Internal reserves judiciously used. Constr Buc 16 no.735:2 8 F'64.

1. Din subredactia voluntara de la Galati (for Tonu).

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TUDOR, Gh.; TONU, Haralambie, tehnician; FAROGA, Emil, corespondent

From the prefabrication plants. Constr Buc 16 no. 739:2
7 March '64.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONU, Haralambie, tehnician

News from the Enterprise of Prefabrications, Galati.
Constr Buc 16 no. 752:2 6 June '64.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONURIST, E.

Great reserves are hidden in socialist agriculture.

p. 433 (Sotsialistlik Pollumajandus. Vol. 12, no. 10, Oct. 1957. Tallinn, Estonia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONURIST, E.

Our new tasks. p. 145.

SOTSIALISTLIK POLLUMAJANDUS. Tallinn, Hungary. Vol. 13, no. 4, Apr. 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8 No. 4, July, 1959.
Uncl.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, A.O.; TONYAN, V.A.

[Dictionary of mathematical terms in English, Russian, Armenian, German and French] Slovar' matematicheskikh terminov na angliiskom, russkom, armianskom, nemetskom, frantsuzskom iazykakh. Erevan, Izd-vo AN Arm.SSR, 1965. 237 p. (MIRA 18:7)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, TS. R.

27668. O razlichnykh formakh tsvetka v merendera trigyna. Doklady (Akad. nauk arm. SSR), T. X, No. 4, 1949, s. 183-88.- Rezyume na arm. yaz.

SO: Knizhnaya Letopis, Vol. 1, 1955

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, TS.R.

Various blossom forms of Merendera trigyna. Dokl.AN Arm.SSR 16 no.5: 183-188 '53. (MLRA 9:10)

1.Institut Botaniki Akademii nauk Armyanskoy SSR, Yerevan. Predstavleno A.L.Takhtadzhyanom.
(Merendera) (Botany--Variation) (Plants, Flowering of)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

BENETSKAYA, G.K.; MOVSESYAN, S.N.; TONYAN, TS.R.

Heterogeneous division of tissue cells in angiosperms. Izv.AN Arm. SSR.Biol.i sel'khoz.nauki. 4 no.5:439-447 '51. (MLRA 9:8)

1. Institut genetiki i selektsii rasteniy Akademii nauk Armyanskoy SSR.
(Angiosperms) (Plant cells and tissues) (Cell division (Biology))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V. A., Cand Phys-Math Sci -- (diss) "On Certain Problems of the Theory of Gravimetric Approximations." Mos, 1957. 7 pp (Mos State Pedagogical Inst im V. I. Lenin), 140 copies (KL, 50-57, 118)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/020/60/133/003/021/031XX
C 111/ C 333

16.3000

AUTHOR: Tonyan, V. A.

TITLE: On the Weighted-Polynomial Approximation of Analytical Functions in Infinite Domains

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 3, pp. 535-536

TEXT: Theorem: Let $f(z)$ be an analytical function in the semiplane $\operatorname{Im} z \geq 0$; $|f(z)| \leq M(r)$; $|z| \leq r$; $\operatorname{Im} z \geq 0$; Δ_1 denotes the semiplane $\operatorname{Im} z \geq 1$. If it is put

$$E_n(f, h, 1) = \inf_{\{P_n(z)\}} \text{l.u.b.}_{\operatorname{Im} z \geq 1} h(z) \left| f(z) - P_n(z) \right| ,$$

then it is

$$E_n(f, e^{-|z|^\lambda}, 1) \leq C M(n^{1/\lambda}) \exp(-\ln^{\frac{\lambda-1}{\lambda}}) \text{ for } \lambda > 1.$$

C does not depend on n.

For the proof the author forms the function

$$\Phi_R(z) = \frac{1}{2\pi i} \int_{L_R} f(\zeta) V_\zeta(z) d\zeta + \frac{1}{2\pi i} \int_{C_R} \frac{f(\zeta)\, d\zeta}{\zeta - z}$$

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S/020/60/133/003/021/031XX
C 111/ C 333

On the Weighted-Polynomial Approximation of Analytical Functions in Infinite Domains

according to S. N. Mergelyan (Ref.4), where L_R is the interval $-R \leqq z \leqq R$, C_R is the semicircle $|z| = R$, $\mathrm{Im}\, z \geqq 0$ and

$$V_\zeta(z) = \frac{e^{im_\zeta z} - e^{im_\zeta \zeta}}{(z-\zeta)\, e^{im_\zeta z}} \; ; \; m_\zeta = \left[\frac{1}{1} \ln \frac{M(|\zeta|)(1+|\zeta|^2)}{2\delta 1} \right] .$$

Then the author shows that $G_R(z)$ for $R \to \infty$ converges to an entire function $G(z)$ uniformly in every finite domain. Then he states that

$$G(r) \leqq c \exp \frac{r}{\ell} \ln \frac{M(2r)(1+4r^2)}{\delta} .$$

If now

$$F_1(z) = \sum_0^n a_k z^k$$

is a section of the Taylor series of $G(z)$, then it holds for $|z| \leqq \frac{R}{\ell}$

Card 2/3

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A5519

S/020/60/133/003/021/031XX
C 111/ C 333

On the Weighted-Polynomial Approximation of Analytical Functions in Infinite Domains

in Δ_1 for $n = \left[c \frac{R}{\rho} \ln \frac{M(2R)}{\beta}\right]$ the estimation $|P(z) - f(z)| \leq 2\delta$. For suitable choice of R the theorem follows.

There are 5 Soviet references.

PRESENTED: May 6, 1960, by A. N. Kolmogorov, Academician.

SUBMITTED: May 5, 1960

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V.A.

Montel's problem. Dokl.AN Arm.SSR 10 no.4:145-148 '49. (MLRA 9:10)

1.Sektor matematiki i mekhaniki Akademii nauk Armyanskoy SSR, Yerevan.
Predstavleno A.L.Shaginyanom.
(Functions, Entire)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V. A.

27580. Ob odnoy zadache montelya. Doklady (Akad. Nauk arm. SSR), T. X, No. 4 1949, s. 145-48 Rezyume na arm. yaz.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

SOV/22-11-4-8/11

AUTHOR: Tonyan, V.A.

TITLE: ~~On Weighted~~ Polynomial Approximation on the Real Axis (O vzveshenno-polinomial'nom priblizhenii na deystvitel'noy osi)

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR, Seriya fiziko-matematicheskikh yestestvennykh i tekhnicheskikh nauk, 1958, Vol 11, Nr 4, pp 79 - 94 (USSR)

ABSTRACT: The introduction contains the formulation of the problem and some results of Mergelyan [Ref 1] and Dzhrbashyan [Ref 2,5] . § 1 contains auxiliary theorems. The results of § 2 have been already announced by the author (see [Ref 6]). § 3 presents the theorem: The function $f(x)$, $|f(x)| \leq 1$ is assumed to vanish for $|x| \geq R$ and to possess the modulus of continuity $\omega(\delta)$ on $[-R,R]$. Then it is

$$E_n(f,h) = \inf_{\{P_n(x)\}} \sup_{-\infty<x<\infty} \left\{h(x)\left|f(x)-P_n(x)\right|\right\} \leq AR^{3/2}\,\omega\left(\nu_n^{-\frac{1-\varepsilon}{2}}\right)$$

where $\varepsilon > 0$ is arbitrarily small, A does not depend on n and

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On Weighted Polynomial Approximation on the Real Axis SOV/22-11-4-8/11

$$\nu_n = \int_0^{C_0 p^{-1}(n)} \frac{P(t)dt}{1+t^2}$$, where $C_0 > 0$ does not depend on n and $P(t) = -\ln h(x)$. In § 4 the author shows in two theorems the influence which the analyticity of the function in a domain and the metric properties of this domain have on $E_n(f,h)$.

There are 8 references, 7 of which are Soviet, and 1 is Finnish.

SUBMITTED: March 21, 1958

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V.A.

Weighted-polynovial approximation of differentiable functions on the real axis. Dokl. AN SSSR 105 no.4:656-658 D '55. (MLRA 9:3)

1. Predstavleno akademikom A.N. Kolmogorovym.
(Polynomials) (Functions) (Approximate computation)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V. A.

USSR/Mathematics - Approximation, Asymptotic 11 Mar 52

"Asymptotic Approximation of Continuous Functions in Sets Dividing a Plane," V. A. Tonyan, Sector of Math, Acad Sci Armenian SSR

"Dok Ak Nauk SSSR" Vol LXXXIII, No 2, pp 187-190

Derives a sufficient condition for the possibility of asymptotic approximation by means of meromorphic functions. Submitted by Acad M. V. Keldysh 14 Jan 52.

214T48

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, A.O.; TONYAN, V.A.

[Dictionary of mathematical terms in English, Russian, Armenian, German and French] Slovar' matematicheskikh terminov na angliiskom, russkom, armianskom, nemetskom, frantsuzskom iazykakh. Erevan, Izd-vo AN Arm.SSR, 1965. 237 p. (MIRA 18:7)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V. A.

Functions

Asymptotic approximation of continous functions on manifolds, splitting a plane.

Dokl. AN SSSR 83 No. 2, 1952

Akademii Nauk Armyanskoy SSR Recd. 1 Jan. 1952

SO: Monthly List of Russian Accessions, Library of Congress, August 1952 1953, Uncl.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAN, V.A.

Weighted-polynomial approximation of analytic functions in infinite domains. Dokl.AN SSSR 133 no.3:535-536 Jl '60. (MIRA 13:7)

(Functions, Analytic)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

ABRAMYAN, B.L.; TONOYAN, V.S.

Torsion of a prismatic rod with a cross section in the shape of an ellipse with grooves. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 13 no.5:3-15 '60. (MIRA 14:1)

1. Institut matematiki i mekhaniki Armyanskoy SSR.
(Torsion) (Elastic rods and wires)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/022/60/013/005/001/008
C111/C222

AUTHORS: Abramyan, B.L., and Tonoyan, V.S.

TITLE: Torsion of a Prismatic Bar the Cross Section of Which is an Ellipse With Notches

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 5, pp. 3 - 15

TEXT: The authors consider the torsion of a prismatic bar the cross section of which is an ellipse having two notches lying symmetrically at the ends of the small semiaxis. The tension function $U(\alpha,\beta)$, where the elliptic coordinates α,β are defined by

$$x = c \operatorname{ch}\alpha \sin\beta\,, \qquad y = c \operatorname{sh}\alpha \cos\beta, \tag{1.1}$$

in the quarter ellipse is sought in the form

$$U(\alpha,\beta) = \begin{cases} U_1(\alpha,\beta) & \text{in } \Omega_1\,, \text{ where } \alpha \leq \alpha_1\,; \\ U_2(\alpha,\beta) & \text{in } \Omega_2\,, \text{ where } \beta \geqslant \beta_1\,, \end{cases} \tag{1.3}$$

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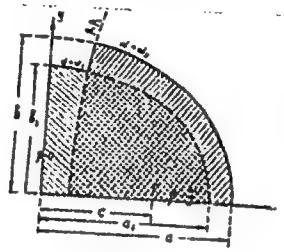
"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

Torsion of a Prismatic Bar the Cross Section of Which is an Ellipse With Notches

where Ω_1 and Ω_2 are the overlapping regions in figure 2.

Fig. 2



Фиг. 2.

According to G.A. Grinberg (Ref. 8) the functions U_1 and U_2 are set up in the form

(1.8) $$U_1(\alpha, \beta) = \sum_{k=1}^{\infty} f_k(\beta) \sin \gamma_k(\alpha - \alpha_1), \quad (0 < \alpha < \alpha_1)$$

Card 2/5

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

Torsion of a Prismatic Bar the Cross Section of Which is an Ellipse With Notches

$$(1.9)\quad v_2(\alpha,\beta) = \sum_{k=1}^{\infty} \varphi_k(\alpha) \sin \mu_k (\beta - \beta_1), \quad (\beta_1 < \beta < \tfrac{\pi}{2})$$

where

$$(1.10)\quad \gamma_k = \frac{(2k-1)\pi}{2\alpha_1}, \qquad \mu_k = \frac{(2k-1)\pi}{\pi - 2\beta_1}$$

$$(1.11)\quad f_k(\beta) = \frac{2}{\alpha_1} \int_0^{\alpha_1} v_1(\alpha, \beta) \sin \gamma_k(\alpha - \alpha_1) d\alpha,$$

$$(1.12)\quad \varphi_k(\alpha) = \frac{4}{\pi - 2\beta_1} \int_{\beta_1}^{\frac{\pi}{2}} v_2(\alpha, \beta) \sin \mu_k(\beta - \beta_1) d\beta .$$

After the use of boundary conditions and conditions of compatibility the authors obtain infinite linear systems of equations for the determination of the integration constants. It is shown that these systems are complete-

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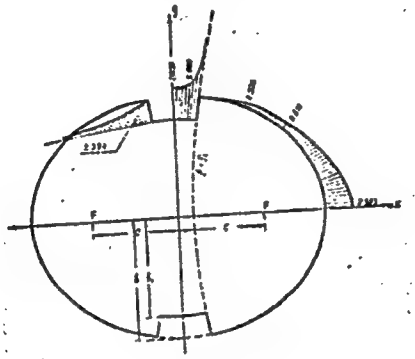
"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/022/60/013/005/001/008
C111/C222

Torsion of a Prismatic Bar the Cross Section of Which is an Ellipse With Notches

ly regular. An explicit expression is given for the torsional strength. Figure 6 shows the distributions of the tangential stresses

Fig. 6



Фиг. 6.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

S/022/60/013/005/001/008
C111/C222

Torsion of a Prismatic Bar the Cross Section of Which is an Ellipse With Notches

There are 2 tables, 6 figures and 8 references : 5 Soviet, 1 German and 2 English.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics of the Academy of Sciences Armyanskaya SSR)

SUBMITTED: June 17, 1960

Card 5/5

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TONYAYEV, V., starshiy inzh.

"Study of lakes" by B. B. Bogoslovskii. Rech. transp. 20 no.8: 56 Ag '61. (MIRA 14:10)

1. Metodicheskiy kabinet Ministerstva rechnogo flota. (Lakes) (Bogoslovskii, B. B.)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

USSR/Microbiology. Micfobes Pathogenic for Man and Animals F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57715

Author : Shayn D. A., Tonyshev R. F., Bryzgunova G. V.
Inst : State Scientific-Control Institute of Veterinary Preparations
Title : Preparation of Formol-vaccine of Paratyphoid of Piglets on Hottinger and Pea Hydrolysis Media.

Orig Pub : Tr. Gos. nauchno-control'n. in-ta vet. preparatov, 1957, 7, 255-257

Abstract : No abstract

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

ALEKSEYEV, Vladimir Ivanovich; ZARETSKIY, [illegible]; TYUKOVIN, I.N.; BOGATOV, I.P., retsenzent; BELOV, M.I., retsenzent; IVANOV, K.A., retsenzent; MEYYEROVICH, M.G., retsenzent; ORFANOV, I.K., retsenzent; "ITOV, S.M., retsenzent; TONYAYEV, V.I., retsenzent

[Moscow-Gorkiy-Moscow; guidebook on the Moscow Canal, and the Volga, Oka, and Moscow Rivers] Moskva - Gor'kii - Moskva; putevoditel' po kanalu imeni Moskvy, Volge, Oke i Moskve-reke. Moskva, Izd-vo "Transport," 1964. 101 p. (MIRA 17:6)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

ONUFRIYENKO, Yu.F.; TARAN, F.I.; TONYUK, N.I.

"Khmel" sprayer. Zashch. rast. ot vred. i bol. 7 no.8:19-21 Ag '62. (MIRA 15:12)

(Spraying and dusting equipment)
(Zhitomir Province—Hops—Diseases and pests)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

1003, 1.

"Fundamental concepts of the shape of a ship." (To be contd.) p. 172. (Brodogradnja. Vol. 2, No. 5/6, May/June 1951. Zagreb.)

SO: Monthly List of East European Accessions. Vol. 3, no. 3. Library of Congress. March 1954. Uncl.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

TOKE, L.

HUNGARY / Organic Chemistry. Natural Products and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khimiya, No 2, 1959, 4860.

Author : Beke, D., Barczai, M., and ~~Tocke, L.~~
Inst : Not given.
Title : Notes on the Chemistry of Sanguinarine.

Orig Pub: Magyar Kem Folyoirat, 64, No 4, 125-130 (1958) (in Hungarian with a German summary).

Abstract: Two routes are proposed to the synthesis of sanguinarine (I) from chelidonine (the principal alkaloid in Chelidonium majus L.). Both approaches were developed by the authors in connection with their investigation of the tautomeric forms of I (II-IV). Using a modified Gadamer procedure (J. Gadamer et al, Arch Pharm, 262, 452 (1924)), 20 gms of crude chelidonine are added in small

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001756310003-5

HUNGARY / Organic Chemistry. Natural Products and Their Synthetic Analogs. G-3

Abs Jour: Ref Zhur-Khimiya, No 2, 1959, 4860.

Abstract: portions to 40 gms of $(CH_3CO)_2O$; after 24 hrs (20°), 19.5 gms of o-acetylchelidonine (V) crystals are obtained, mp 188-180° (from butanol). A solution of 8 gms $(CH_3COO)_2Hg$ in 42 ml H_2O / 12 ml glacial CH_3COOH is added with stirring to 4 gms V in 20 ml ethanol plus 20 ml butanol; after 12 hrs at 20°, CH_3COOHg begins to precipitate out; after 24 hrs following refluxing of a water bath (7 hrs) and acidification of the filtrate with 20 ml conc HCl, 2.7 gms IIc are obtained, mp 278° (decomp; from water). /TN: for meaning of subscripts consult key in insert/.

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